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PCT10

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/070,496

DATE: 08/14/2002 *P.6*
 TIME: 09:06:05

Input Set : A:\9013-44.ST25.txt
 Output Set: N:\CRF3\08142002\J070496.raw

```

3 <110> APPLICANT: University of Glasgow
4     Davies, Roger W.
5     Kaiser, Kim
6     Yang, Ming Yao
8 <120> TITLE OF INVENTION: ESSENTIAL GENES AND ASSAYS RELATING THERETO
10 <130> FILE REFERENCE: 9013-44
12 <140> CURRENT APPLICATION NUMBER: US 10/070,496
13 <141> CURRENT FILING DATE: 2002-03-07
15 <150> PRIOR APPLICATION NUMBER: PCT/GB00/03444
16 <151> PRIOR FILING DATE: 2000-09-06
18 <160> NUMBER OF SEQ ID NOS: 902
20 <170> SOFTWARE: PatentIn version 3.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 131
24 <212> TYPE: DNA
25 <213> ORGANISM: Drosophila melanogaster
27 <400> SEQUENCE: 1
28 gcaccatgttt ttcagttcccc cagtttgtca gcgatgtccc taccatgcgg atgtgctcgc      60
30 ggattgattt cgaactogaac ttccggtccg ttttgcgttt ttaacgtaaa tcccgtagca      120
32 aaaagttaga t
34 <210> SEQ ID NO: 2
36 <211> LENGTH: 345
37 <212> TYPE: DNA
38 <213> ORGANISM: Drosophila melanogaster
40 <400> SEQUENCE: 2
41 ggcgaaga tccgcagtag cgaagtgaat agctgttccg ccagcaaaa caaaaaaaac      60
43 agccgaagca gagagtgcca gaaaagtgc tctctccact ctgcgtgtgt ccgcgagtgg      120
45 gtgagcgtgt gtgtaaaaat agcgaagtga aggggattcc caaaataaa acaaaagtcc      180
47 gtgccactcg agttctgtcc gcccaattaag aaaccctcgc cgacagtcatt tcccaccgct      240
49 gacgagtgtg aacaatgcatt ttctaaccgt aaacatattc ccaatcttcc gaaggaaaatt      300
51 ataccgagtc gggtagacca gggaaatccc agaacaattg aattc
53 <210> SEQ ID NO: 3
55 <211> LENGTH: 354
56 <212> TYPE: DNA
57 <213> ORGANISM: Drosophila melanogaster
59 <400> SEQUENCE: 3
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62 agagagccag agccgagcag cagccgagag agagcgtaa ggaagagagt ggcgacgcga      120
64 gttcttttat atggaatttg tgttttttgg gcagcatggc gagcatcctt ttaccaaacac      180
66 cctcgccaaa aggacatagc gaaaaacggg ctggcgctgt gtgtgtgcag ccgaaaatgt      240
68 gctggcagcg gaacttaatg gatgaatatg aatgaaacgc cgcacaagtc caattggggt      300
70 agggctgggg ggagggggcag ggcgattttt gtgcaagggt gctgggggga attc      354
72 <210> SEQ ID NO: 4

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74 <211> LENGTH: 607
75 <212> TYPE: DNA
76 <213> ORGANISM: Drosophila melanogaster
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81 agaaagataaa cttgcgacgc ctccatataa atttaaccgc tgcttgacaa ggaacaactg      120
83 cgaacatgga tctcagtggt ccacaaactc tgaacaacat acttcagccc gacgagttga      180
85 aactcgtgcc ggaagacgtc cagaagaaat tgcgaggta catcaacaat ttctcagatg      240
87 agtactgcaa gaaccgtgcg gcgcgcaatc ggttgggtaa gtttttata ttgtatatat      300
89 actaaaatgc gccattttt gcaataaacc ctttatttgc atgcgtatgc ttttacctcc      360
91 aactttgcgg cgtttacgcg ctcatagacc gctcttgtta ataagcaact ggcagactga      420
93 tggttttctag cgtggttaac actcttgcgc catttacata tttttgtata gaaattaaat      480
95 ataaaattcc gggttgggtc aattaaaaac aatggctgct gcagcaacat tattttcctt      540
97 ataatttcac ctaccgggtg ggtacactg cccggcattt ccaccaaaaa gtgattagtc      600
99 cgagtttt
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103 <211> LENGTH: 585
104 <212> TYPE: DNA
105 <213> ORGANISM: Drosophila melanogaster
107 <400> SEQUENCE: 5
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110 aagttgtttaa atgtgctgtg cgtattttta tagttagtgt agaactgtac aagttttagc      120
112 taaagcgacg agacgctgtg ggcacgtaca agtcgaaaaa tgtagtgcac cgcctcgtgt      180
114 atcgctctga acatagagtt ttgccgcact tcggttgtcg gcggcagcaa gaaaaggcca      240
116 caaatacttg gcaatttttt aaccaggtaa gcagaaagtg ctgaatcata atcgtagaat      300
118 tggctgtacc gtagaaccta agagccctgt ctaattaatc ctttaatatg atggatatag      360
120 caatttttgc gtggcgctgc ttgcaaatga aaatggcgca taccgggtat agacatttag      420
122 ctaatttttg gccctttaaa accatagttt ttgtatttt tagcgcggag gcgcgtatgt      480
124 aggcctgaat ttgtttacta taaagtgaac ccctcgaag aaccttaata ggaaataata      540
126 aatagccggg gactaccggc aacgcccat aacacgcaca cttac
128 aatagccggg gactaccggc aacgcccat aacacgcaca cttac      585
129 <210> SEQ ID NO: 6
130 <211> LENGTH: 408
131 <212> TYPE: DNA
132 <213> ORGANISM: Drosophila melanogaster
134 <400> SEQUENCE: 6
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137 gaagcgcgcg agcttggggg tggaccccat ttgtttatag gccctctctg agccgcgctc      120
139 gttgtcaatt atcggtttaa ccatgtctga ccgcgggggc cagtggcaat taattaatc      180
141 aatcgtctta atgtctgcg tatcgctgtt aggaacggct ttaatcgctt taattcaata      240
143 aacatttcct gctctctctt ccatcgca gcaaaaatcg aatcttctat gtggcctctc      300
145 acggagtcct agccgccctc gttgccatct gcatgtgggc cttcttccaa actctcgatc      360
147 ctccgattcc caagtggacc ctggacgcgt cctgatag tagacaaac
150 <210> SEQ ID NO: 7
151 <211> LENGTH: 540
152 <212> TYPE: DNA
153 <213> ORGANISM: Drosophila melanogaster
155 <220> FEATURE:
156 <221> NAME/KEY: misc_feature
157 <222> LOCATION: (1)..(540)

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158 <223> OTHER INFORMATION: n = ambiguous/unknown nucleotide
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162 cgacggggacc acottatgtt attatatgag ctgaaccata cttttttcga taaccgaatt 60
164 atccocaaact tatcggggtgc agottataag agttgcacac cgtccggata cttagctcac 120
W--> 166 catactnnnt ttacatgtgt atgaccacgc tgactgcaag cccactaccg attattcact 180
168 gagactttat cgcacaactgc ttcagtcgoc tctacaaaac ccccgcgtac cctcagacta 240
170 gggactcatc agacacccta ggcgtgagacc gactgaaggc accttactgc cgaatgtcct 300
172 tggcatgata ggttcccaac actcgtcctt ggaggtcttc cgcgcgctaa tacggttgcc 360
174 cgatcttctt ccgaagtcgc gattttatga acgtcggctc aaacttggcg ttataaccag 420
176 ttgaaagca gcttggtctg aaattccggc gataaacctc ttggcctcgc acaaacgata 480
W--> 178 ccatacagga acngatatta tatctctctt cgnctcgnat gggcttactt ctcatctgac 540
181 <210> SEQ ID NO: 8
182 <211> LENGTH: 267
183 <212> TYPE: DNA
184 <213> ORGANISM: Drosophila melanogaster
186 <400> SEQUENCE: 8
187 gtctgtacga caagtctcga ttggacaaga acacgcagga cttcaccggc caccgccctgg 60
189 cctttttcgc cgacgatgag tatctgaacg agccggccgt gaacaccatc cggcggtata 120
191 agctctactc cgatcgctgc gcgcgttacg gcaagtcgoc ctacotttat cccatgtacg 180
193 gcctgggtga gctgcgccgc ggaattgcac gtctgtggtt catctacggc ggcaccctaca 240
195 tgcttgacaa gccatctgac gagattg
198 <210> SEQ ID NO: 9
199 <211> LENGTH: 583
200 <212> TYPE: DNA
201 <213> ORGANISM: Drosophila melanogaster
203 <400> SEQUENCE: 9
204 cgatactctt tggcgctacc acgagatagc agggctgccc aaacatcgat tgctgcatta 60
206 tcgattgtgc ttcgcaacat catcgatttg tttoaggcca aaaagcttat tatgttataa 120
208 tataattata ataattaatt aagtataaat taagacotta aattaatttt taaattgtaa 180
210 acgtattttt cacaagtgtc aatgtacgat agtacaattt agtttaaatt atagagcatg 240
212 gagtgaacct cactgatcgc gttaccaaca atttttttta aataaatttg agcttgacat 300
214 attcgcgcct ttgatcctta tacagttaaa gcaaaacaatt gatcaattaa aaaatcatca 360
216 tctcaattct tattcattat tattcataca gacaattatt gtattaccaa tttttccctt 420
218 tttagtttac acctacgcca ctacgtgtta taataaaagg ttgcaattc agcacatatt 480
220 ttattgtgtt tatattattt cagcagtata aacagtgccg gccatgcgcg ccatctcatg 540
222 agaatttaac caaaactact tacaatggg aaatttgatg gca
225 <210> SEQ ID NO: 10
226 <211> LENGTH: 480
227 <212> TYPE: DNA
228 <213> ORGANISM: Drosophila melanogaster
230 <400> SEQUENCE: 10
231 gtttattgtg ttttcaaacg tgaagtagtg aacgtgaact ttagtgaac ccaaatcgga 60
233 gatggctcgt accaagcaaa ctgctcgcaa atcgactggt ggaaggcgcg caccgcaaaa 120
235 actgctactc aaggcgcgtc gcaagagtgcc tccagccacc ggagggtgtga agaagccaca 180
237 cgcgtatcgc cctggaaccg tggccttgcg tgaaattcgt cgtacacaaa agagcaccca 240
239 gcttctaatc cgcgaagtcgc ctttcacgct tctggtcgct gaaatcgctc aggactttaa 300
241 cagggactcgt cgtattccaga gctcggcggt tatggtctcg caggaaagcta gcgaagccta 360
243 cctggttggt cttctcgaa ataccaaact gtgtgccatt catgccaagc gttgtcaocat 420
245 aatgccaaa gacatccagt tagcgcgacg cattotttag ccatgtgctt taagctgaca 480

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248 <210> SEQ ID NO: 11
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250 <212> TYPE: DNA
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252 <400> SEQUENCE: 11
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255 accggacggga tctgtgttcg gctgacgaac cgtgatcgag atacttcggc cgttgcgttt      120
256 ttctgacttcc atggcatctg gtgcttagcg cagccgttca ttcgccaacg aacccccgac      180
257 atagaagcagc gtcagcatgt ggcacaaacg gagaagtag gaaaaacaaa cggagtagag      240
258 gaaaagccca acaaaaaaa aaaacgaacg acggccaggg aaaaatgccca aaaaacctgg      300
259 tggaataaagt tcttaacctat tctattgaga cgcaaggagt gcttaggata aagtgttttg      360
260 tgtaagcaac gaggcctgta ccagtgtcac catgtgcata tataacctcg aacatagac      420
261 aaactggcct ggactgttgc gccagagatt tgggtgtgtg aatgggtcat tcggggaat      480
262 gggtcctttg ctgaaaaaaa ggccttttca ggtctcgaca tttttacgta atggacgatt      540
263 ac
264
265 <210> SEQ ID NO: 12
266 <211> LENGTH: 409
267 <212> TYPE: DNA
268 <213> ORGANISM: Drosophila melanogaster
269 <400> SEQUENCE: 12
270
271 gattgtgttt ctgcttttcg atttatagct agatttttaa caataagggc tggatatatt      60
272 aaattgaaca aatgtgatgg agacatgtta attaaactag atcacataaa caagaaaaatt      120
273 gctttaaatt aagatagaat aaacacataa atcaacattt ttgcaaggac aatacttttc      180
274 agataacatt tagctgattg ttccgaaact cagttccacc tctgattttg tgctgggtgag      240
275 aatgttgctg ctgttcagca gccggttttt actgcaaaat tgcaacaaaa tcgaatgaaa      300
276 aggcctctaa ttggaacttca agcagctaac gcatccacc aaggtgccac agacaccagg      360
277 tggactccga agtttcgac accagcgctt tcgaaatoca gatcgacac      409
278
279 <210> SEQ ID NO: 13
280 <211> LENGTH: 507
281 <212> TYPE: DNA
282 <213> ORGANISM: Drosophila melanogaster
283 <220> FEATURE:
284 <221> NAME/KEY: misc_feature
285 <222> LOCATION: (1)..(507)
286 <223> OTHER INFORMATION: n = ambiguous/unknown nucleotide
287 <400> SEQUENCE: 13
288
289 gtagtgggga agaattggaa ggggtgacaca catgaaaaag tgttggtagc cacatgataa      60
W--> 310 atcaaaatttg ataagataag aaaagctaaa taaacaatt atccannnga ccaacttaag      120
311 gttgcccgcg tggggtgtga cttggacagc ctgatcaact gtttcgtagt cctttagggg      180
312 cttatcctga aggccttagg accggctggg tctcgtatat atcgttttca ctgcagttgt      240
313 agttaagtag ttgcccgcga gagagacaac gatatccacc ctggtattcc tgatatgcaa      300
314 ccaaatagga aaatgattga cttcgcaagg atgacagcag cagtaggaac aggaaccgct      360
315 tatgttttct tgcattctcc ctctactaca ccttggttcg tgacccaagc cgcattccag      420
316 atgagcggat aaacattctt cgcagctgct gcgtgcctcg actgatcatc tgcgtaaaag      480
317 aaatggcgat aacaaatccg ttatgtc
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319 <210> SEQ ID NO: 14
320 <211> LENGTH: 432
321 <212> TYPE: DNA
322 <213> ORGANISM: Drosophila melanogaster

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332 <400> SEQUENCE: 14
333 atcgggagcc actcagtgc gggcgctctc attgcagcgc cagatataaa cacaagcgat 60
335 cggcgctcact atcgtcagcg gggacaaactt catccggaca caaggaccgc aggtaaaatgt 120
337 gtacacacat atgtgagacg accctaaacg atacctcttt tgacctgaag catcgagttag 180
339 ttttgactgcy cagtttggaa aaaaggttca actgtcatag ggccctttca tttggatttg 240
341 cccctcagc cgattcagct ggtgctcttg caaagaaagt taaaacccaa aatcatcoaa 300
343 gccgatttca ttctattgga agaaaccaac caaccaacca accaaccaac gaacatcact 360
345 atgtaagaac ccaccgaagc aatcatttct attctacgtc cactacccaa gaatttggcc 420
347 gaaaagggtc ga
350 <210> SEQ ID NO: 15
351 <211> LENGTH: 439
352 <212> TYPE: DNA
353 <213> ORGANISM: Drosophila melanogaster
355 <220> FEATURE:
356 <221> NAME/KEY: misc_feature
357 <222> LOCATION: (1)..(439)
358 <223> OTHER INFORMATION: n = ambiguous/unknown nucleotide
361 <400> SEQUENCE: 15
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W--> 364 ggtcaacttc accgtcgacg agatccgttg cctcatggnn nacatccgca acatgtctgt 120
366 gattgcccgc tagaccacgc caagtcact ctgaccgatt cccttgtctg gaaggctggt 180
368 tattggcagg agccaaagct ggtgagactc ttctcactga caccgcgaag cagcagcagg 240
370 agcgctgcac taccatcaag tcgacgtaag accagtcagt ttccagcacc cagcgctttt 300
372 ttaataagct ttcttttttg cgtggctttc ctgttatttg aggtggaggga aaagcatctt 360
374 ggtgttgatt taccaccgcg ttacgcgcgag aaggagtgcg aagggtttcc tgatcacttt 420
376 gatcgattgc ccggttccac
379 <210> SEQ ID NO: 16
380 <211> LENGTH: 532
381 <212> TYPE: DNA
382 <213> ORGANISM: Drosophila melanogaster
384 <400> SEQUENCE: 16
385 atcgagcgag tgcgatacga aaacaaaagc cgagcgccgc tccaataaaa gttcagttgg 60
387 cgctacgttaa acaaaactttg cggttagtct gcatctgggg tgtccagaac gaccggttct 120
389 tctgctaggc actaagatga acttgggaaat caaacggctga gttatcagca acgattaaagc 180
391 actagcgttc aaaggtacttc tgggggttaaa ataaactcca ttatcagctg ttactcagtt 240
393 aacaaacagt gcacaaaatg acgcccgaatg ttaaggacga tggtagactg agagtatccg 300
395 gaattatccg aaattaccgc agctatcgcc agcatcgacc gattaccagt gaagggtttg 360
397 catcgaatat acccataaat ttcaaatata ttaataaaaa ctacattatt acattttctc 420
399 ttgctcagct ggctggaggg gaaaaatgta gatgacgaag ccgaaggtct ttggcgcaatt 480
401 aacgatcgct ctacgactta agcgactttg ccggtcgctc cgggtgggtc at 532
404 <210> SEQ ID NO: 17
405 <211> LENGTH: 536
406 <212> TYPE: DNA
407 <213> ORGANISM: Drosophila melanogaster
409 <400> SEQUENCE: 17
410 atcgggtgcaa taaaaacagc gagtgcgcga aaagaagcgc aaagcgaagc gaaccaataa 60
412 gaacagccaa acgcaaaagag agctcctctg acacacacgc acacagcagg ctgaagcaga 120
414 cccacacaca cgatcacact agtgcggtgt gtatacgact ggaaaaactag gcggtggtaa 180
416 atgtgaagct gaaaaaagct gaaaaaaagg aaaaggaaaa ctcgtggggt ggtgggtggc 240

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RAW SEQUENCE LISTING ERROR SUMMARY
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:7; N Pos. 127,128,129,493,513,519
Seq#:13; N Pos. 106,107,108
Seq#:15; N Pos. 99,100,101
Seq#:119; N Pos. 103,104,105
Seq#:121; N Pos. 102,103,104
Seq#:124; N Pos. 511
Seq#:126; N Pos. 97,98,99
Seq#:127; N Pos. 100,101,102
Seq#:128; N Pos. 98,99,100
Seq#:129; N Pos. 100,101,102
Seq#:130; N Pos. 99,100,101
Seq#:131; N Pos. 98,99,100
Seq#:233; N Pos. 97
Seq#:339; N Pos. 479
Seq#:387; N Pos. 499
Seq#:396; N Pos. 423,851
Seq#:441; N Pos. 99,100,101
Seq#:461; N Pos. 28
Seq#:509; N Pos. 414,427
Seq#:540; N Pos. 445,446,447,448,449
Seq#:599; N Pos. 303,304,308
Seq#:650; N Pos. 482
Seq#:774; N Pos. 68,69
Seq#:799; N Pos. 100,101,102,427
Seq#:807; N Pos. 106,107,108
Seq#:809; N Pos. 104,105,106
Seq#:810; N Pos. 100,101,102
Seq#:811; N Pos. 101,102,103
Seq#:814; N Pos. 104,105,106
Seq#:875; N Pos. 433,435,456,503,566

VERIFICATION SUMMARY

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Input Set : A:\9013-44.ST25.txt

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L:166 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:120
L:178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:480
L:310 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:60
L:364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:60
L:2788 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119 after pos.:60
L:2848 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121 after pos.:60
L:2949 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124 after pos.:480
L:2993 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:126 after pos.:60
L:3024 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:127 after pos.:60
L:3057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:128 after pos.:60
L:3090 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:129 after pos.:60
L:3121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:130 after pos.:60
L:3156 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:131 after pos.:60
L:5498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:233 after pos.:60
L:7834 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:339 after pos.:420
L:9100 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:387 after pos.:480
L:9337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:396 after pos.:420
L:9351 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:396 after pos.:840
L:10566 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:441 after pos.:60
L:11014 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:461 after pos.:0
L:12022 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:509 after pos.:360
L:12024 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:509 after pos.:420
L:12721 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:540 after pos.:420
L:14086 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:599 after pos.:300
L:15265 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:650 after pos.:480
L:18791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:774 after pos.:60
L:19486 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:799 after pos.:60
L:19498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:799 after pos.:420
L:19696 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:807 after pos.:60
L:19740 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:809 after pos.:60
L:19771 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:810 after pos.:60
L:19802 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:811 after pos.:60
L:19875 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:814 after pos.:60
L:21248 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:875 after pos.:420
L:21250 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:875 after pos.:480
L:21252 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:875 after pos.:540